



BOROUGH OF WIDNES.

Annual Report

OF THE

MEDICAL OFFICER OF HEALTH.

WIDNES :

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1898.

Borough of Widnes.

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ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH.

—:O:—

— 1897. —

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TO THE TOWN COUNCIL OF THE BOROUGH OF WIDNES.

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GENTLEMEN,

I have pleasure in submitting to you the Annual Report for 1897, on the Health and Sanitary conditions of the Borough of Widnes, with statistics of the Mortality returns, Births, Notification of Infectious Diseases, and the distribution of the same in the various Wards of the Borough.

The Sanitary work is steadily proceeded with, particularly in the making of back passages, improving sewers, and in the paving of streets.

Due to the proceedings in the case of *Wood v the Corporation*, the conversion of old dilapidated and foul privies into Water Closets has been suspended for several months.

The town's water should as far as practicable be utilised for the purpose of clearing away human excrement and filth, from the immediate vicinity of dwellings into the sewers, which open into, and discharge their contents into the tidal waters of the Estuary of the Mersey.

Births—

The total number of births registered was 1057 (540 males and 517 females) giving a birth rate of 32·7 per thousand, as against 982 births in 1896, or 30·6 per thousand of the population.

Table of Births for each month during 1897 :—

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Males ...	48	38	47	44	37	39	52	48	41	45	52	49	540
Females	47	34	56	41	31	53	44	55	41	32	40	43	517
	95	72	103	85	68	92	96	103	82	77	92	92	1057

Deaths—

The total number of deaths registered during the year was 570 giving a death rate of 17·8 per thousand of the population, as against 474 in 1896, or 14·8 per thousand, and 734 in 1895, or 22·9 per thousand.

The deaths of children under one year of age including premature births, numbered 208, or 6·5 per thousand, between the ages of 1 and 5 years, there were 100 deaths, or 3·1 per thousand.

Deaths of persons under one year	208
„ „ over 1 year and under 5	100
„ „ „ 5 years „ 15	25
„ „ „ 15 „ „ 25	31
„ „ „ 25 „ „ 65	145
„ „ „ above 65	61
Total.....	570

Inquests and Injuries—

There were 24 deaths from injuries, as against 27 in 1896.

Mortality Returns—

The following table gives the Mortality Returns in each Ward during the different months of the year :—

	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Total	1896
Farnworth	3	2	3	6	3	2	2	6	7	2	5	6	47	52
Halton	7	8	11	4	5	5	2	9	2	12	7	19	91	55
Simms Cross.....	7	8	5	4	3	6	3	25	11	21	16	13	122	104
Victoria	13	10	7	7	6	8	5	10	4	8	8	9	95	91
Waterloo	12	6	5	1	6	5	9	26	8	6	11	11	106	91
West Bank	4	10	7	6	4	6	8	22	18	3	12	9	109	81
	46	44	38	28	27	32	29	98	50	52	59	67	570	474

Estimated Population—

The Census of 1881 being	24,935
and that of 1891 being.....	30,011
	5,076

Upon that basis the average increase for the past 10 years is therefore 507 per annum.

The excess of births over deaths since 1891 being 3429, the average increase in 7 years is 489 per annum.

A Census taken by the School Board Officers, 31st July, 1897, shews a return of 5,418 inhabited houses. Taking 5·3 as the average number of individuals to each house, the census should be 31,424.

The average rate of increase being about 500, the census for 1897 should be 32,511.

The mean between the above two would therefore be 31,967, and the estimated population should be approximately 32,000.

Year			Births			Deaths			Increase of Births over Deaths
1891	...	...	1013	...	...	570	...	...	443
1892	...	...	1185	...	...	598	...	...	587
1893	...	...	1137	...	...	730	...	...	407
1894	...	...	1122	...	...	535	...	...	587
1895	...	...	1155	..	...	734	...	...	421
1896	...	...	982	...	...	474	...	...	508
1897	...	...	1057	...	...	571	...	...	476
									3429

Zymotics—

The total number of Zymotics notified during the year was 176 as against 434 in the previous year and 601 in 1895.

The following table shews the distribution of Scarlet Fever and Typhoid in the different Wards of the Borough during the past three years :—

	Scarlet Fever.						Typhoid.					
	1895	1896	1897	1895	1896	1897	1895	1896	1897	1895	1896	1897
Farnworth Ward.....	92	...	12	...	1	...	1	...	8	...	5	...
Halton ,, ...	80	...	24	...	4	...	15	...	19	...	7	...
Simms Cross ,, ...	188	...	62	...	11	...	8	...	14	...	23	...
Victoria ,, ...	186	...	38	...	12	...	8	...	34	...	7	...
Waterloo ,, ...	32	...	2	...	7	...	13	...	70	...	23	...
West Bank ,, ...	23	...	16	...	14	...	9	...	69	...	11	...
	601	154	49				54	214	76			

Scarlet Fever—

During the year 1897, 49 cases of Scarlet Fever were notified, as against 154 cases in 1896; and 601 cases in 1895.

Of the 49 cases notified 13 were removed to Hospital. Due to want of accommodation the remainder were treated at home, isolation, as far as possible being strictly enforced in every case. Immediately after convalescence being certified, thorough disinfection of all rooms was carried out, the clothing being taken to the steam disinfector erected at the Isolation Hospital, and disinfected.

Small Pox—

I am pleased to report that for the past two years, no further case of Small Pox has been notified.

Erysipelas—

Twenty-eight cases of Erysipelas were notified as against 36 during the previous year.

Puerperal Fever—

Four cases were notified as against four in 1896.

Measles and Whooping Cough—

These diseases are not notifiable Four deaths from Measles were registered, as against 1 death from Measles in 1896, and 56 in 1895. Eight deaths from Whooping Cough were registered, as against 39 in 1896, and 10 in 1895.

Diarrhœa and Gastro Enteritis—

Diarrhœa and Gastro Enteritis gave rise to 104 deaths, of these 85 deaths were under five years of age and 19 above five years of age.

The undermentioned is a table shewing the distribution of the same in the different wards of the Township and the periods of the year when this disease was most prevalent.

On comparing this table with that of the three years notifications of Typhoid Fever, it is noticeable that the distribution appears to be similar in time and place.

It is quite possible that in a good number of instances, cases certified to have died from Gastro Enteritis and Diarrhœa, were Typhoid Fever in an earlier stage.

Table of Deaths from

	Gastro Enteritis.	Diarrhœa.	
Deaths, under five years of age	72	13	85
„ above „ „ „	17	2	19
	89	15	—
		Total...	104

Table of Deaths from Gastro Enteritis and Diarrhœa.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Farnworth	0	0	1	0	0	0	0	2	1	1	1	0	6
Halton	1	0	0	0	1	0	0	2	4	3	0	1	12
Simms Cross.....	0	1	1	0	0	1	2	14	3	1	0	0	23
Victoria	0	0	1	1	0	1	0	4	2	1	0	1	11
Waterloo	2	0	1	0	0	1	0	16	3	3	1	0	27
West Bank	2	1	0	0	0	0	0	10	10	0	2	0	25
	5	2	4	1	1	3	2	48	23	9	4	2	104

Typhoid or Enteric Fever—

During the year 1897, there were 76 cases of Typhoid notified to exist in the Borough, and distributed as follow :

Farnworth	...	...	...	...	...	...	5
Halton	...	...	...	...	...	...	7
Simm's Cress	...	...	...	...	...	...	23
Victoria	...	...	...	...	...	...	7
Waterloo	...	...	...	...	...	...	23
West Bank	...	...	...	...	...	...	11
Total	...	...	...	...	...	...	76

Forty-eight cases were removed to the Isolation Hospital, the remainder were treated at their homes. Several cases had to be refused admission, due to want of accommodation on the male side.

A Table of Typhoid or Enteric Fever cases notified during the last three years, showing the various wards and months in which they occurred.

WARDS.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	TOTALS
Farnworth—1895			1										1
1896	2						1		1	3	1		8
1897							2		1	1	1		5
Halton—1895	3	1	2	1	1					3	3	1	15
1896		2		3			2	2	2	2	2	4	19
1897		2	1						1	2	1		7
Simm's Cross—1895	1		1					3			2	1	8
1896	1	2				1	2	2	3	2		1	14
1897								3	8	8	3	1	23
Victoria—1895	2		1				1		3		1		8
1896	2	1		1		2	3	14	8		2	1	34
1897	3	1							1	2			7
Waterloo—1895		1	1	1			1	3	4		1	1	13
1896		1	1			1	5	30	16	10	3	3	70
1897								8	14		1		23
West Bank—1895					1			4	3	1			9
1896						1	5	31	21	6	4	1	69
1897								2	5	3	1		11
	14	11	7	6	2	5	22	102	91	43	26	14	344

Taking this table and comparing it with the table of deaths from Gastro Enteritis and Diarrhœa, it is to be observed that the distribution of the diseases intimately coincide with one another in time and place. August, September and October being the Months when most prevalent. The Wards principally affected being West Bank, Waterloo and Simms Cross. These facts point to some local common cause.

In my First Annual Report, 1894, I suggested that the prevalence of Typhoid might be attributed to the hot season of the year, causing fermentation of liquids in the various Ashpits and Privies into which typhoid excreta is thrown, growth of the Typhoid poison, which on becoming dried is carried about by the atmosphere.

Further, in 1895, I concluded after careful consideration that the centres of infection could be principally traced to the Model Conveniences, open Privies and Ashpits in the Borough.

The experimental researches of Dr. Robertson, Medical Officer of Health, Sheffield, support this view, as they have shewn "That the Typhoid organism (*Bacillus Typhosus*) is capable of growing very rapidly in certain soils, and that apparently under certain conditions, the organism can survive from one Summer to another, and that the rains of Spring and Autumn, or the frosts and snow of Winter do not kill them off."

In so-called Typhoid infected areas, conditions exist similar to those experimented upon, and he concludes that the infected privy would appear to be admirably adapted for the preservation of the Typhoid Baccillus owing to its constantly receiving fresh additions of organic matter.

To prevent the spreading of Typhoid, similar precautions were taken to those adopted last year, viz.:—Thorough disinfection by hand fire engine), of every privy on being emptied, and also all centres where liquid privy contents were observed oozing through imperfectly constructed privy walls.

This year, instead of Perchloride of Mercury, I ordered the use of Hypochlorite of Soda, and the same has proved an excellent Germicide.

Milk Supply—

The milk supply was on the whole satisfactory. There is certainly great objection to the dangerous custom of hawking milk and selling the same in back passages in the immediate proximity of infected privies. Milk being easily contaminated by the Typhoid Bacillus should be boiled, as by boiling all organisms are destroyed.

Sewers—

During the hot weather the sewers have been regularly flushed and every attention paid to the regulation of the free flow of all liquids through them.

Improvements—Sanitary Conveniences—

There are now 710 Waste Water Closets and 458 ordinary flush Closets. The number of inhabited houses being 5,418 ; 397 are empty and 30 in course of erection. Each house has an open privy and ashpit except where above conveniences have been fixed.

There still exist a large number of Model conveniences (M.C.'s), and other infected, foul, and dilapidated privies, that are in my opinion a distinct danger to the health of the people living in close contact to them, and these places should further receive the serious attention of the Health Authority.

I am indebted to the courtesy of Mr. Sinclair, the Borough Surveyor for the following report.

Mr. Sinclair's Report—

The sanitary improvements carried out during the year 1897 are as follows :—

In Simm's Cross Ward and Victoria Ward 25 streets have been sewered, kerbed, flagged, and macadamized, and 44 back passages have been sewered, paved, and channelled with impervious asphalte joints.

The total mileage of new streets completed is 1 mile, 507 yards.

„ „ new passages „ 2 miles, 157 yards.

„ „ 9" and 12" dia sewers laid is 3 miles. 15 yards.

Total number of house drains connected to the above street and passage sewers :—972 houses. This work entailed the removal of 22,670 sup. yards of surface debris in streets about 1' 6" deep ; and 11031 sup. yards of surface debris in passages about 1' 4" deep.

Sanitary Work Accomplished—

The Inspector of Nuisances carries out his duties satisfactorily.

I have pleasure in appending his Annual Report for 1897.

Sanitary Precautions—

The following instructions were given by me to the Borough Surveyor with regard to the Sanitary precautions to be taken by his department, and the same were carried out to my satisfaction.

- 1.—All back passages in course of construction, to be systematically and frequently disinfected during the months of June, July, August and September, particular attention to be given to places where foul liquids or human excreta oozes through defective walls.
- 2.—Passages being made, to be disinfected with hand water cart. The main streets to be disinfected with horse carts, with a solution of Carbolic Acid.
- 3.—Privies on being emptied, and any fouling of streets and passages to be at once disinfected.
- 4.—Urinals to be systematically attended to by disinfectors.
- 5.—Sewers to be frequently flushed special, and more frequent attention to be given to sewers in the lower parts of the Borough.
- 6.—The disinfectant chiefly to be used to be Hypochlorite of Soda, strength 1 per cent. Solution by Volume.

Diphtheria and Membraneous Croup—

Nine cases of the former and 6 of the latter were notified during the year as against 18 cases in 1896. There was no death certified during the past year from Diphtheria, two deaths occurred from Membraneous Croup. I am pleased to report that the Council has sanctioned the use of Anti Diphtheritic Serum to be supplied to any local practitioner on application in all future cases of Diphtheria.

Insanitary Property—

With the Borough Surveyor and Sanitary Inspector, I inspected several houses in the Borough, and on finding the same in an insanitary condition, reported to my Committee who ordered the places to be closed as dwellings or to be put into a proper Sanitary Condition.

Bakeries—

All Bakeries have been duly inspected during the year and were found in a clean and Sanitary Condition.

Slaughter Houses—

I have found all Slaughter Houses clean and in good order.

Cowsheds and Dairies—

I have inspected the Cowsheds and Dairies in the Borough and found them in a clean and Sanitary Condition.

Food and Drugs Acts—

Superintendent Keighley, of the Widnes Police Division of the County of Lancaster, has kindly given the following return :—

“Return of Samples taken under Food and Drugs Act, for year ending 31st December, 1897—

Description.	No Taken	No. of Prosecutions.	No. of Convictions	Amount of Penalties
Mustard	1	0		
Ground Ginger	3	0		
New Milk	15	1	0	0
Butter	6	0		
Irish Whiskey	2	0		
Rum	3	0		
Vinegar	2	0		
Scotch Whiskey	1	0		
Ginger	2	1	0	0
Brown Ginger	1	0		
Gin	1	0		
Total...	37	2	0	0

J. KEIGHLEY, Superintendent.”

Escapes of Gases from Works—

Several complaints being made about the escape of noxious gases I reported the same to the Government Inspector, Dr. Affleck, who immediately took steps to have the matter remedied, and the same is still having his serious attention.

Water Supply—

Due to the memorandum forwarded by the Local Government Board I made special enquiry into the Water Supply. The Water Supply is on the Constant System, there being no Storage Cisterns in the houses.

I am indebted to the Courtesy of Mr. Isaac Carr, Gas and Water Engineer, for the following analysis and report of the water supplied to the Borough.

It is satisfactory to learn from the Engineer's report that contamination from surface sewage is almost impossible.

The County Analyst's report is most gratifying.

COPY OF ANALYSIS OF WATER

from Stock's Well and Netherley pumping stations, by Dr. Campbell Brown, May 1st, 1897. In parts per 100,000.

Mark and Denomination of Sample.					Netherley	Stock's Well
Total solid matter in solution	...	...			13·4	16
Organic Carbon	}	...	...	...	Minute	traces only
Organic Nitrogen						
Ammonia	...	...	...	...	·007	·002
Ammonia from Organic Matter—by distillation with Alkaline Permanganate				...	·005	·003
Nitrogen as Nitrates	...	...	...	...	·163	·299
Combined Chlorine	...	...	...	...	2·35	1·9
Hardness (total)	...	...	...	...	7½°	9½°

REMARKS—No organisms of any kind, no bacteria developed in either sample in four days. The Netherley water is exceedingly pure and absolutely free from bacteria and every sign of contamination. The Stocks Well water is nearly as good.

Mr. Carr's Report—

Our water is derived from deep wells sunk in the red sandstone formation, and there is no chance of superficial contamination, as the rock is covered throughout the whole district with a very thick layer of boulder clay. The bacteriological examination, as stated in the analysis enclosed, bears out this statement.

The quantity of water supplied during last year totals up to 879,173,236 gallons, of which 652,745,000 gallons were used for manufacturing purposes and 226,428,236 gallons for domestic and sanitary purposes.

Hospitals—Isolation Fever Hospital—

Scarlet Fever—

Thirteen cases of Scarlet Fever were removed to, and treated in the Isolation Hospital, during the year, with no deaths. In the previous year, 33 cases were removed to, and treated in the Hospital—no deaths.

Typhoid Fever—

Forty-eight cases of Typhoid Fever were removed to, and treated in the Isolation Hospital, with 10 deaths. In 1896 there were 76 cases removed to, and treated in hospital with 17 deaths.

The following Table gives the number of cases treated in the Isolation Fever Hospital since 1890 :—

	Scarlet Fever	Deaths.	Enteric Fever	Deaths.
1890	41	3	51	5
1891	15	1	31	6
1892	11	1	35	9
1893	2	0	73	21
1894	31	1	31	8
1895	82	5	42	6
1896	33	0	76	17
1897	13	0	48	10
	228	11	387	82

Of the 76 cases of Typhoid Fever notified, only 48 were isolated in hospital. Due to want of room on the male side a number had to be treated at home.

Extension—

The plans of the administrative block and other extensions are at present under the consideration of the Local Government Board. It would be satisfactory to have the buildings completed as soon as possible, so as to be prepared for any sudden emergency, and to have isolation carried out more effectively.

Accident Hospital—

These were 90 cases treated in the Accident Hospital as against 105 cases in 1896.

The Staff at both hospitals have carried out the work entrusted to them satisfactorily.

General—

I again beg to thank the Medical Practitioners in Widnes and District for their assistance in carrying out the work entrusted to me, and also in so promptly notifying cases of Infectious or Contagious Disease coming under their notice.

I am, Gentlemen,

Your obedient servant,

Public Health Department,

D. U. MACLENNAN,

Town Hall, Widnes.

Medical Officer of Health.

25th February, 1898.

 CLASSIFICATION OF DEATHS DURING 1897 :—

					Under 5 Years	5 Years and Upwards	Total
Gastro Enteritis	...	...	...	...	72	17	89
Scarlatina	...	...	...	...	1	1	2
Diphtheria	...	...	...	...	2	0	2
Measles	...	...	...	...	4	0	4
Whooping Cough	...	...	...	...	8	0	8
Rheumatic Fever	...	...	...	...	1	1	3
Phthisis	...	...	...	...	2	17	19
Bronchitis	...	..	...	..	75	83	158
Heart Disease	...	...	...	...	0	7	7
Typhoid	...	...	...	...	1	15	16
Membraneous Croup	...	...	...	...	1	1	2
Diarrhœa	...	...	...	...	13	2	15
Meningitis	...	...	...	...	18	2	20
Inquests	...	...	...	...	4	20	24
All other diseases	...	...	...	...	106	96	202
					308	262	570
